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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,892

12/29/2005

Marcel Breeuwer

NL 030839

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

LEACH, CRYSTAL I

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

10/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,892	Applicant(s) BREEUWER, MARCEL	
	Examiner CRYSTAL I. LEACH	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/13/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statements (IDS) submitted on July 13, 2007 is in compliance with 37 CFR 1.97 and 1.98. The references therein have been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gupta et al. (US 2003/0065258).
4. Regarding claims 1 and 11, Gupta et al. teach a computer-readable medium (see para. [0020]) having embodied thereon a computer program for the non-invasive quantitative assessment of cardiac perfusion from a series of cardiac images comprising image segments (see abstract), said computer program being for processing by a computer (see para. [0015]), said computer program comprising a first code segment selecting at least one image segment with normal perfusion, such that cardiac perfusion parameters of the remaining image segments are based on a perfusion parameter of said at least one image segment having normal perfusion (see para. [0007]-[0008]). See also fig. 1-5.

Regarding claim 2, Gupta et al. teach that the computer-readable medium having embodied thereon a computer program is capable of segmenting a myocardium (see

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fig. 2, ref. number "26") and determining time-intensity profiles of a contrast agent in the myocardium (see para. [0019]-[0025]).

Regarding claim 3, Gupta et al. teach calculating a ratio of cardiac perfusion parameters derived at stress and cardiac perfusion parameters derived at rest for each image segment (see para. [0008], [0026]-[0030]).

Regarding claim 4, Gupta et al. teach that the ratio of cardiac perfusion parameters is a myocardial perfusion reserve index (MPRI) (see para. [0001], [0008], [0025]).

Regarding claims 5 and 6, Gupta et al. teach that the MPRI is calculated from relative maximum upslopes derived at rest and at stress (see para. [0027]).

Regarding claim 10, Gupta et al. teach a workstation (100) being adapted for the quantitative assessment of cardiac perfusion, said apparatus comprising means for executing the computer program according to claim 1 (see para. [0015] and fig. 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (US 2003/0065258).

Gupta does not explicitly teach that the perfusion parameter is used for visualizing insufficiently perfused myocardial areas, wherein normal perfusion regions are identified as a result of selecting the highest perfusion parameter value. However, it would be obvious to one of ordinary skill in the art that since the invention of Gupta et al. enables a user to view myocardial perfusion and applies myocardial perfusion reserve index, it would also be capable of allowing a user to identify or visualize insufficiently perfused myocardial regions.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Breeuwer (US 2002/0095086) teaches a method of visualizing the perfusion of an organ while utilizing a perfusion measurement; Akesson et al. (6,368,574) teach contrast agent-enhanced magnetic resonance imaging of tissue perfusion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRYSTAL I. LEACH whose telephone number is (571)272-5211. The examiner can normally be reached on Monday through Friday, 8 am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art
Unit 3737

/Crystal I Leach/
Examiner, Art Unit 3737